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ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[EPA-R09-OAR-2012-0266; FRL-9736-9]

Revisions to the California State Implementation Plan, San Joaquin Valley Unified Air Pollution Control District

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: EPA is approving revisions to the San Joaquin Valley Unified Air Pollution Control District (SJVUAPCD) portion of the California State Implementation Plan (SIP). This action was proposed in the Federal Register on April 26, 2012 and concerns oxides of nitrogen (NO_x) from solid fuel fired boilers. We are approving a local rule that regulates these emission sources under the Clean Air Act (CAA or the Act).

DATES: This rule will be effective on [Insert date 30 days from the date of publication in the Federal Register].

ADDRESSES: EPA has established docket number EPA-R09-OAR-2012-0266 for this action. Generally, documents in the docket for this action are available electronically at http://www.regulations.gov or in hard copy at EPA Region IX, 75 Hawthorne Street, San Francisco, California. While all documents in the docket are listed at http://www.regulations.gov, some

information may be publicly available only at the hard copy location (e.g., copyrighted material, large maps, multi-volume reports), and some may not be available in either location (e.g., confidential business information (CBI)). To inspect the hard copy materials, please schedule an appointment during normal business hours with the contact listed in the **FOR FURTHER INFORMATION CONTACT** section.

FOR FURTHER INFORMATION CONTACT: Idalia Pérez, EPA Region IX, (415) 972-3248, perez.idalia@epa.gov.

SUPPLEMENTARY INFORMATION: Throughout this document, "we," "us" and "our" refer to EPA.

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I. Proposed Action

On April 26, 2012 (77 FR 24883), EPA proposed to approve the following rule into the California SIP.

Local Agency	Rule #	Rule Title	Adopted	Submitted
SJVUAPCD	4352	Solid Fuel Fired Boilers, Steam Generators and Process Heaters	12/15/11	02/23/12

We proposed to approve this rule based on our conclusion that it complies with the relevant CAA requirements. Our proposed rule and Technical Support Document (TSD)[1] contain more information on the rule and our evaluation.

II. Public Comments and EPA Responses

EPA's proposed action provided a 30-day public comment period. During this period, we received comments from the following party.

1. Adenike Adeyeye, Earthjustice; letter dated and received May 29, 2012.

The comments and our responses are summarized below.

Comment #1: Earthjustice stated that these revisions are an improvement over prior versions of this rule.

Response #1: No response needed.

Comment #2: Earthjustice disagreed with EPA's proposal to approve the NO_x emission limit in Rule 4352 for municipal solid waste (MSW) fired units as RACT. Earthjustice provided several arguments in support of its objection to EPA's proposal, each of which we address following separate comment summaries below.

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1 *See* U.S. EPA Region 9, "Technical Support Document for EPA's Notice of Proposed Rulemaking for the California State Implementation Plan, San Joaquin Valley Unified Air Pollution Control District's Rule 4352, Solid Fuel Fired Boilers, Steam Generators and Process Heaters," April 2012 (TSD).

Comment #2.a: Earthjustice stated that the New Jersey Department of Environmental Protection (NJDEP) has set NO_x emissions limits for MSW-fired boilers at 150 ppmv at 7% O_2 (approximately 142 ppmv at 12% CO_2). Quoting from a SIP submission from NJDEP, Earthjustice asserted that NJDEP established this limit based on "the capability of existing selective non-catalytic reduction (SNCR) emission controls to reduce emissions more than are now being achieved." The commenter stated that the District's unsupported assertion that it is impossible to meet a limit lower than 165 ppmv at 12% CO_2 is simply false.

Response #2.a: We disagree with the commenter's suggestion that the NO_x emissions limits established in NJDEP's rule generally represent NO_x RACT for existing MSW-fired boilers equipped with SNCR controls. As the commenter correctly notes, under Title 7, Chapter 27, Subchapter 19, Section 12 of the New Jersey Administrative Code (N.J.A.C. 7:27-19.12), NJDEP limits NO_x emissions from MSW combustors to 150 ppm at 7% O_2 averaged over 24 hours (approximately 142 ppm at 12% CO_2). In lieu of complying with this emissions limit, however, the rule allows an owner or operator of an MSW incinerator to comply with an alternative emission limit or a "facility-specific NO_x control

plan" upon receipt of written approval from NJDEP, pursuant to section 13 of the rule (N.J.A.C. 7:27-19.13). *See* N.J.A.C. 7:27-19.12(b). Section 13 identifies, among other things, the types of information that an owner or operator must submit to NJDEP as part of a request for such an alternative emission limit or facility-specific NO_x control plan, including a list of all NO_x control technologies available for use with the equipment or source operation, an analysis of the technological feasibility and costs of installing and operating each such control technology, and estimates of the NO_x emissions reductions attainable through the use of each control technology which is technologically feasible. *See* N.J.A.C. 7:27-19.13(d). The rule authorizes NJDEP to approve a request for an alternative emission limit or facility-specific NO_x control plan *only if*, among other things, the request identifies all available NO_x control options and demonstrates that any control options that the owner/operator has rejected are ineffective or unsuitable for the particular equipment or would involve disproportionately high costs, in comparison to the associated NO_x reductions or costs borne by other like facilities. *See* N.J.A.C. 7:27-19.13(g)(3).

According to NJDEP, three of the five MSW incinerators subject to N.J.A.C. 7:27-19.12 appear to have obtained alternative emission limits pursuant to Section 13 of the rule

and are not currently subject to the 24-hour NO_x limit of 150 ppm at 7% O_2. *See* e-mail dated July 24, 2012, from Michael Klein (NJDEP) to Stanley Tong (EPA Region 9). Table 1 below shows the current NO_x limits in the operating permits for each of these five MSW incinerators under NJDEP jurisdiction.

Table 1

Facility	Emission Limit (ppm at 7% O_2)	Emission Limit (approximate ppm at 12% CO_2)	Averaging time(hours)
Essex[2]	300	285	1
	155	147	24
Warren[3]	300	285	3
	205	195	24
Union[4]	225	214	3
	180	171	24
Gloucester[5]	350	333	3

2 *See* Air Pollution Control Operating Permit, Permit Activity No. BOP090001, Covanta Essex Co. (Essex PTO) at pg. 57 of 95.
3 *See* Air Pollution Control Operating Permit, Permit Activity No. BOP090002, Covanta Warren Energy Resource Co. LP (Warren PTO) at pp. 57 and 60 of 101.
4 *See* Air Pollution Control Operating Permit, Permit Activity No. BOP080001, Covanta Union (Union PTO) at pp. 56 and 57 of 90.
5 *See* Air Pollution Control Operating Permit, Permit Activity No. BOP090002, Wheelabrator Gloucester Company (Gloucester PTO) at pp. 38 and 68 of 106.

	150	143	24
Camden[6]	300	285	3
	150	143	24

Of the three New Jersey facilities that have obtained permit limits exceeding the 24-hour NO_x limit of 150 ppm (at 7% O_2) in NJDEP's rule (Essex, Warren, and Union), two facilities (Warren and Union) have permit limits that also exceed the 24-hour NO_x limit of 165 ppm (at 12% CO_2) in SJVUAPCD's Rule 4352. *See* Table 1. The remaining two facilities, which are subject to the 150 ppm limit in NJDEP's rule (Gloucester and Camden), are both equipped with SNCR using urea injection as a NO_x control technique. *See* Gloucester PTO at pp. 45-46 of 106; Camden PTO at pg. 183 (of electronic file). Both of these facilities became subject to the 24-hour NO_x limit of 150 ppm (at 7% O_2) in N.J.A.C. 7:27-19.12 effective May 1, 2011. *See* Gloucester PTO at pp. 38 of 106; Camden PTO at pg. 34 of 99. Notably, for the Camden facility, the 150 ppm limit applied "on and after May 1, 2011, if compliance is achieved by installing a new NO_x air pollution control system on an existing MSW incinerator or by physically modifying an existing MSW incinerator." Camden PTO at pg. 34 of

6 *See* Air Pollution Control Operating Permit, Permit Activity No. BOP080002, Camden Cnty Energy Recovery Assoc LP (Camden PTO) at pp. 34 and 66 of 99.

99. The Gloucester and Camden facilities are the only MSW incinerators we know of that are subject to the 24-hour NO_x limit of 150 ppm (at 7% O_2) in N.J.A.C. 7:27-19.12.

Only one existing facility in the SJV (Covanta Stanislaus, Inc.) currently operates MSW-fired boilers subject to SJVUAPCD's Rule 4352. The two MSW-fired boilers at the Covanta Stanislaus facility are equipped with SCNR using ammonia injection systems, instead of urea injection systems, for NO_x control. *See* Facility-wide Permit to Operate for Covanta Stanislaus, Inc., San Joaquin Valley Air Pollution Control District, Permit Unit: N-2073-1-10 (expiration date 10/31/2016), "Equipment Description" (Stanislaus PTO). Although ammonia and urea injection both serve as reducing agents for NO_x emissions in combination with SNCR control systems, these control methods require operation at different temperature windows and generally are not interchangeable without facility retrofits. *See Alternative Control Techniques Document – NOx Emissions from Industrial/Commercial/Institutional (ICI) Boilers,* US EPA 453/R-94-022 (March 1994) (1994 ACT) at sections 5.5.1.1 ("Ammonia-based SNCR") and 5.5.1.2 ("Urea-based SNCR"). For example, the optimum reaction temperature range for the reduction of NO_x by ammonia is 870° to 1,100° C, while the optimum range for the reduction of NO_x by urea is 900° to 1,150° C, and ammonia can be injected both in aqueous solution or anhydrous

form while urea may only be injected in aqueous form. *Id.* These technological distinctions between ammonia-based SNCR and urea-based SNCR highlight uncertainties about whether the controls implemented by the Gloucester and Camden incinerators in New Jersey (*i.e.*, urea-based SNCR) are technologically and economically feasible for implementation at the one existing MSW-fueled facility in SJV.

Additionally, according to information submitted by SJVUAPCD at EPA's request, four of the five MSW incinerators subject to the NJDEP rule have equipment that differs significantly from the equipment at the Covanta Stanislaus facility in SJV. *See* emails dated September 4, 2012 and September 11, 2012, from Nichole Corless (SJVUAPCD) to Idalia Perez (EPA Region 9), with attachments. Specifically, SJVUAPCD states that the Covanta Stanislaus facility is configured with stoker grates whereas the New Jersey MSW incinerators have reciprocating, horizontal, and roller grates, which enable them to meet a slightly lower NO_x limit. *Id.* These technological distinctions raise additional questions about whether the controls implemented by the New Jersey facilities are feasible for implementation in SJV. Moreover, the fact that both the Gloucester and Camden incinerators in New Jersey became subject to the 150 ppm limit in N.J.A.C. 7:27-19.12 only as of May 1, 2011, and in Camden's case

only if the facility made physical modifications to, or installed new air pollution control equipment on, the existing MSW incinerator, further highlights uncertainties about whether the chosen control methods at these two facilities are "reasonably available" for implementation at existing MSW-fired boilers in SJV.

Finally, information submitted by the SJVUAPCD indicates that retrofits to existing SNCR systems to achieve additional NO_x reductions are not cost-effective in light of the relatively insignificant difference between the NO_x limit in NJDEP's rule (150 ppm at 7% O_2, or approximately 142 ppm at 12% CO_2, 24-hour average) and the limit in SJVUAPCD's Rule 4352 (165 ppm at 12% CO_2, 24-hour average). Specifically, with respect to staged combustion retrofits to an ammonia-based SNCR control system, SJVUAPCD submitted information indicating that the cost per ton of reductions in NO_x emissions from 165 to 142 ppm at 12% CO_2 would be $27,650/ton. *See* email dated September 4, 2012, from Nichole Corless (SJVUAPCD) to Idalia Perez (EPA Region 9), with attachment. Further taking into account certain operational conditions at the Covanta Stanislaus facility which indicate that the limit in NJDEP's rule (150 ppm at 7% O_2) would equate to approximately 148 ppm (rather than 142 ppm) at 12% CO_2, the cost per ton of NO_x emission reductions from 165 ppm to 148 ppm at 12%

CO_2 would be $37,404/ton. *See id*. These costs exceed the levels generally considered to be "reasonable" within the meaning of RACT.

In sum, the information before us raises significant questions about the technical and economic feasibility of achieving a 24-hour NO_x emission limit of 150 ppm at 7% O_2 (approximately 142 ppm at 12% CO_2) at existing MSW-fired boilers equipped with ammonia-based SNCR in the SJV, and the commenter has provided little information to substantiate its claim in this regard. Absent specific information to support a conclusion that further NO_x controls are "reasonably available" for implementation at existing MSW-fired boilers in the SJV, we find that the 24-hour NO_x emission limit of 165 ppm at 12% CO_2 in SJVUAPCD's Rule 4352 represents current RACT for these units.[7]

Comment #2.b: Earthjustice asserted that the District has not adequately analyzed and considered the feasibility of either

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7 The commenter states that "the District's unsupported assertion that it is impossible to meet a limit lower than 165 ppmv at 12% CO_2 is simply false," but this assertion mischaracterizes the District's position, as test data for Covanta Stanislaus submitted by the District clearly show average NOx emission levels below the 165 ppm limit in Rule 4352. *See* TSD at 6. An emission limit of 165 ppm at 12% CO_2 ensures that the source is obligated to continually operate its emission control system while leaving the facility a small compliance buffer to account for occasional short-term variabilities inherent in its process. *Id.*

injecting more ammonia or adding more nozzles to existing SNCR controls to meet a lower NO_x emissions limit. The commenter stated that according to the NJDEP State Implementation Plan (SIP) Revision for the Attainment and Maintenance of the Fine Particulate Matter ($PM_{2.5}$) National Ambient Air Quality Standard (NJDEP 2009 $PM_{2.5}$ SIP) submitted to EPA in 2009, 11 regulated units at 4 facilities in New Jersey would meet the lower NO_x emissions limit in N.J.A.C. 7:27-19.12 by injecting more ammonia or adding more nozzles to existing SNCR controls. The commenter stated that "technical analysis of these demonstrated options must be conducted before EPA can accept ammonia slip as an excuse for rejecting tighter SNCR limits."

Response #2.b: We have generally evaluated the technical feasibility of injecting more ammonia or adding nozzles to existing SNCR controls but do not have sufficient information to conclude that these control methods represent RACT for existing MSW-fired boilers in SJV at this time. According to information submitted by SJVUAPCD at our request, the orientation of the nozzles in the combustion gas stream has a much greater impact on the resulting NO_x emissions than the number of nozzles in the system, and the Covanta Stanislaus facility's nozzles have already been optimized based on the "temperature window where

SNCR works to reduce NO_x effectively." *See* email dated September 4, 2012, from Nichole Corless (SJVUAPCD) to Idalia Perez (EPA Region 9), with attachments. SJVUAPCD also stated that the amount of ammonia injected into the flue gas at Covanta Stanislaus is closely controlled to maximize NO_x reductions and to prevent excessive ammonia slip, and that increases in ammonia injection would "result in negligible NO_x reductions and would exit the system and cause a detached plume," causing violations of permit conditions regarding visible emissions, ammonia slip, and condensable particulate matter. *Id.* (citing continuous emissions monitoring data submitted by Covanta Stanislaus to support these conclusions).

EPA's Alternative Control Techniques document for NO_x emissions from Industrial/Commercial/Institutional Boilers (1994 ACT) supports the general conclusion that simply injecting more ammonia or adding nozzles will not necessarily reduce NO_x emissions in an ammonia-based SNCR system. The 1994 ATC describes the process in an ammonia-based SNCR system as follows:

> In this process, aqueous or anhydrous ammonia is vaporized and injected into the flue gas through wall-mounted nozzles at a location selected for optimum reaction temperature and residence time. The optimum reaction temperature range for this process is 870 to 1,100°C (1,600 to 2,000°F). . . . At

> temperatures above 1,100°C (2,000°F), ammonia injection becomes counterproductive, resulting in additional NO formation. Below 870°C (1,600°F), the reaction rate drops and undesired amounts of ammonia are carried out in the flue gas. Unreacted ammonia is commonly referred to as ammonia slip, breakthrough, or carryover. The amount of ammonia slip also depends in part on the amount of ammonia injected. Although the chemical reaction requires one mole of NH_3 for each mole of NO, the NH_3/NO_x ratio used is usually greater than 1 to avoid an undesired reaction which results in formation of NO. . . . Achievable NO_x reductions for an individual boiler depend on the flue gas temperature, the residence time at that temperature, the initial NO_x concentration, the NH_3/NO_x ratio, the excess oxygen level, and the degree of ammonia/flue gas mixing. Also, stratification of both temperature and NO_x in the flue gas can affect the performance of the SNCR control. The optimum placement of SNCR injectors requires a detailed mapping of the temperature profile in the convective passes of the boiler, because of the narrow temperature window.
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> 1994 ACT at Section 5.5.1.1.

Thus, even assuming it is technologically feasible to inject more ammonia and/or to install additional ammonia injection

nozzles, it is not clear that these methods would further reduce NO_x emissions in an ammonia-based SNCR system, and technical information indicates that such methods could instead lead to increased ammonia slip if not carefully adjusted to account for the specific temperature profile, NH_3/NO_x ratio, oxygen levels, degree of ammonia/flue gas mixing, and other factors specific to the particular boiler and control system.

As the commenter correctly notes, Appendix C of the NJDEP 2009 $PM_{2.5}$ SIP states that "the NJDEP anticipates that the facilities will decrease their emissions due to optimizing their existing NO_x control systems (i.e., either injecting more ammonia or adding more nozzles)." *See NJDEP 2009 $PM_{2.5}$ SIP,* App. C., at 5. This statement alone, however, does not establish that the NO_x emission limit in N.J.A.C. 7:27-19.12 (150 ppm at 3% O_2) represents RACT for existing MSW-fueled boilers. As discussed above in Response 2.a, four of the five MSW incinerators subject to the NJDEP rule have equipment configurations that appear to differ significantly from the Covanta Stanislaus facility, and NJDEP has approved alternate, higher NO_x limits for three of the five subject sources based on the agency's assessment of source-specific technological and/or economic factors. Other than referencing statements of general intent in a New Jersey SIP submission, the commenter provides no technological or economic

information to support its assertion that existing MSW-fired boilers, either generally or in SJV specifically, are capable of meeting a 24-hour NO_x emission limit of 150 ppm at 3% O_2 (142 ppm of at 12% CO_2) by the application of control technology that is reasonably available considering technological and economic feasibility.

Comment #2.c: Earthjustice asserted that the New Jersey rule, along with data presented in EPA's TSD for the proposed rule, "highlights the need for further analysis of potential NO_x controls by the District." Earthjustice stated that information available in EPA's 1994 ACT, which shows NO_x emissions from MSW-fired boilers with SNCR controls ranging from 35 to 167 ppmv at 12% CO_2, calls into question the 165 to 210 ppmv at 12% CO_2 range provided in the District's 2011 Staff Report and places the District's NO_x emissions limit of 165 ppmv at 12% CO_2 at the highest end of the range. Earthjustice also asserted that "[g]iven that the Valley is in nonattainment of the $PM_{2.5}$ NAAQS and is in extreme nonattainment of the 1-hour and 8-hour ozone NAAQS, EPA must require the District to conduct further analysis and ensure that MSW-fired boilers meet the lowest emission limit that can be achieved through the application of RACT."

Response #2.c: First, with respect to the commenter's assertions about the NJDEP rule (N.J.A.C. 7:27-19.12), we addressed these comments above in Response #2.a. Second, with respect to the commenter's assertion about data presented in EPA's TSD, although we agree with the commenter's observation that the NO_x emission limit in Rule 4352 (165 ppmv at 12% CO_2) is at the highest end of the range of NO_x levels identified in EPA's 1994 ACT for MSW-fired boilers operating SNCR controls with ammonia or urea injection, we disagree with the assertion that this necessarily compels further evaluation of the NO_x limit in Rule 4352.

Municipal solid waste varies widely in composition – often including durable goods, non-durable goods, demolition and construction wastes, containers and packaging, food wastes and yard trimmings, and/or miscellaneous inorganic wastes – and the exact makeup of MSW at a particular facility may vary both seasonally and geographically. *See* 1994 ACT at Section 3.4.3. Variability in MSW can affect emissions both due to differences in the availability of fuel-bound nitrogen as well as differences in the heat content of the fuel, which can affect its combustion characteristics. Given the broad technical diversity of existing MSW-fired boilers and their varying fuel compositions, the NO_x emission level that one MSW-fired unit achieves by the

application of reasonably available controls may not necessarily be achievable for others using similar controls. Even where boiler type, control technology, and fuel type are the same, emission levels may differ significantly from boiler to boiler depending on a number of site-specific factors, including furnace dimensions and operating characteristics, design and condition of burner controls, design and condition of stream control systems, and fan capacity. See, for example, 1994 ACT at Appendix B (page B-21), showing achievable NO_x emission levels ranging from 44 to 210 ppm at 3% O_2 for MSW boilers equipped with SNCR.

ACT documents describe available control techniques and their cost effectiveness but do not define presumptive RACT levels as EPA's Control Techniques Guidelines (CTGs) do. The wide range of emission levels provided in the 1994 ACT for MSW-fired boilers equipped with SNCR and using ammonia or urea injection as a control technique (35 to 167 ppmv at 12% CO_2) reflects the significant variation in emission levels that may result from site-specific technological considerations and fuel compositions at different MSW-fired units. Notably, the NO_x emission ranges provided in Appendix B of the 1994 ACT do not identify applicable averaging periods and therefore may not be directly comparable to the 24-hour NO_x emission limit in Rule 4352. *See* 1994 ACT at Appendix B.

EPA has evaluated the control techniques and applicable permit conditions for the two MSW incinerators in New Jersey that are currently subject to the 24-hour NO_x emission limit of 150 ppm (at 3% O_2) in N.J.A.C. 7:27-19.12 (Gloucester and Camden) and concluded that technical distinctions between these facilities and the Covanta Stanislaus facility in SJV raise significant questions about the technological and economic feasibility of those same emission control methods at existing MSW-fired boilers in the SJV. See Response #2.a. We do not currently have information sufficient to support a conclusion that existing MSW-fired boilers using ammonia-based SNCR systems, either generally or specifically in the SJV, are capable of meeting a 24-hour NO_x emission limit of 150 ppm at 3% O_2 (142 ppm of at 12% CO_2) by the application of control technology that is reasonably available considering technological and economic feasibility.

Finally, with respect to the commenter's statement about the SJV area's air quality designations for the $PM_{2.5}$ and ozone National Ambient Air Quality Standards (NAAQS), we note that attainment status designations are not relevant to our evaluation of Rule 4352 for compliance with the technology-based RACT control requirement in CAA section 182(b)(2). The RACT requirement in CAA section 182 is a control mandate that applies independent of the emission reductions needed for attainment of

the NAAQS. *See, e.g.,* EPA's Proposed Rule to Implement the 8-Hour Ozone [NAAQS], 68 FR 32802, 32837 (June 2, 2003) (explaining that "[u]nder subpart 2, RACT requirements for ozone nonattainment areas apply independent of the emissions reductions needed to attain the standard"). We note, however, that the general requirement in CAA section 172(c)(1) to adopt all "reasonably available control measures" (RACM) continues to apply in the SJV area for purposes of attaining the ozone and $PM_{2.5}$ NAAQS (*see, e.g.,* 40 CFR 51.912(d) and 51.1010). Given the severity of the ozone and $PM_{2.5}$ pollution problems in the SJV and the NO_x and $PM_{2.5}$ emission reduction commitments contained in the SIP-approved plans for attainment of the 1997 $PM_{2.5}$ and 1997 8-hour ozone standards in the SJV,[8] we encourage the District to further evaluate potential NO_x and PM control options at its earliest opportunity to determine whether additional controls for existing MSW-fired boilers may be reasonably available for implementation in the Valley.

Comment #3: Earthjustice asserted that EPA should urge the District to reevaluate the startup and shutdown provisions in Rule 4352 as the rule allows units to emit excess emissions for

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8 *See, e.g.,* SIP-approved NOx emission reduction commitments in 40 CFR 52.220(c)(356)(ii)(B)(*2*) and 52.220(c)(356)(ii)(B)(*4*), and 52.220(c)(397)(ii)(B)(*2*).

far longer than necessary. In support of this assertion, the commenter referred to rules adopted by the Placer County Air Pollution Control District (PCAPCD), Yolo Solano Air Quality Management District (YSAQMD) and Sacramento Metropolitan Air Quality Management District (SMAQMD), each of which contain shorter time periods for startup and shutdown operations. Citing a 1999 EPA policy document providing that startup and shutdown periods should be limited "to the maximum degree practicable," the commenter asserted that the District had neglected to evaluate the possibility of requiring shorter startup and shutdown times under Rule 4352 for solid fuel-fired boilers.

Response #3: We disagree with the commenter's assertion that the startup and shutdown provisions in Rule 4352 are deficient. EPA policy for SIPs regarding excess emissions during malfunctions, startup, shutdown, and maintenance provides that for some source categories, "given the types of control technologies available, there may exist short periods of emissions during startup and shutdowns when, despite best efforts regarding planning, design, and operating procedures, the otherwise applicable emission limitation cannot be met." Thus, with limited exceptions, it may be appropriate in consultation with EPA to create "narrowly-tailored SIP revisions" that take

these technological limitations into account and state that the otherwise applicable emissions limitations do not apply during these periods. *See* Memorandum dated September 20, 1999, from Steven A. Herman, Assistant Administrator for Enforcement and Compliance Assurance and Robert Perciasepe, Assistant Administrator for Air and Radiation, to Regional Administrators, Regions I-X, "State Implementation Plans: Policy Regarding Excess Emissions During Malfunctions, Startup, and Shutdown" (1999 SSM Policy) at Attachment, pp. 4-5. According to the 1999 SSM Policy, SIP provisions addressing these circumstances should, among other things, be limited to specific, narrowly-defined source categories. *Id.* Additionally, use of the control technology for the source category should be technically infeasible during startup or shutdown periods; the frequency and duration of operation in startup or shutdown mode should be minimized to the maximum extent practicable; and all possible steps should be taken to minimize the impact of emissions during startup and shutdown on ambient air quality. *Id.*

Rule 4352 generally applies to any boiler, steam generator or process heater fired on "solid fuel" that is operated at a stationary source with a potential to emit at least 10 tons per year of NO_x or VOC. *See* Rule 4352 at sections 2.0, 3.18, and 4.0. Section 5.3 of the rule states that the applicable emission

limits established for this defined source category "shall not apply during start-up or shutdown provided an operator complies with the requirements specified below." The rule then limits the duration of each start-up to 96 hours, except that if curing of the refractory is required after a modification to the unit is made, the duration of start-up is limited to 192 hours, with exceptions only as approved by the District, CARB, and EPA. *See* Rule 4352 at section 5.3.2. The rule also limits the duration of each shutdown to 12 hours, with exceptions only as approved by the District, CARB, and EPA. *Id.* at section 5.3.1. Significantly, Rule 4352 requires, in all cases, that "the emission control system shall be in operation and emissions shall be minimized insofar as technologically feasible during start-up or shutdown." *Id.* at section 5.3.3. These provisions for start-up and shutdown apply to all solid fuel-fired boilers subject to Rule 4352, including biomass-fired and MSW-fired boilers.

Earthjustice refers to rules adopted by the PCAPCD, YSAQMD and SMAQMD to support its assertion that the District should consider establishing shorter exemption periods for startup and shutdowns, but these other California rules apply to source categories that differ from the source category subject to Rule 4352. Both YSAQMD Rule 2.43 and PCAPCD Rule 233, which apply to boilers fueled entirely or primarily with biomass, limit normal

startups and all shutdowns to 24 hours and curing startups to 96 hours. *See* YSAQMD Rule 2.43 at sections 102 and 302, and PCAPCD Rule 233 at sections 101, 206, 214 and 215. Thus, although both the YSAQMD rule and PCAPCD rule limit the allowed duration of startup and shutdown to periods that are shorter than the limits in Rule 4352, both rules apply only to a subset of the boilers subject to Rule 4352. Biomass-fired boilers may not require start-up or shutdown periods as long in duration as those needed by the range of solid fuel-fired boilers subject to SJVUAPCD's Rule 4352, which combust more complex and heterogeneous fuel mixes, including biomass, MSW, coal, and other solid fuels. Notably, neither the YSAQMD rule nor the PCAPCD rule explicitly requires continued operation of emission control systems to the extent feasible during start-up and shutdown periods, as does Rule 4352.[9]

SMAQMD Rule 411, which applies to units fueled with gaseous and non-gaseous fuels, limits startup to a maximum of two hours after a period in which the gas flow is shut off for a continuous period of 30 minutes or longer and limits shutdown to two hours.

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9 The YSAQMD rule states that "the frequency and duration of startup and shutdown periods and their associated emissions shall be minimized as much as technologically feasible." YSAQMD Rule 2.43 at section 302.3. The PCAPCD rule includes alternative pound per hour emission limits for NO_x and CO during startup and shutdown periods. *See* PCAPCD Rule 233 at section 302.2.

See SMAQMD Rule 411 at sections 102, 220 - 222. We are not aware, however, of any solid fuel fired boilers operating in the Sacramento metro area subject to Rule 411. Thus, SMAQMD Rule 411 does not appear to establish that shorter limits on startup and shutdown periods are technologically feasible for solid fuel-fired boilers.

In sum, the start-up and shutdown provisions in SJVUAPCD's Rule 4352 are narrowly-tailored to address the technological limitations of emissions controls at solid fuel-fired boilers and require, unlike the other California district rules cited by the commenter, that source owners/operators continue to operate emission control systems and to minimize emissions to the extent technologically feasible, even during start-up or shutdown periods. We conclude that these provisions in Rule 4352 are consistent with EPA's 1999 SSM policy and appropriate for SIP approval for this particular source category. We agree with the commenter, however, that the District should reevaluate these provisions at its earliest opportunity to determine whether shorter limits on the duration of startup and shutdown periods may be feasible for certain types of solid fuel-fired boilers covered by the rule, and to consider establishing limits on the frequency of such events, to ensure that emissions during start-up and shutdown events are minimized to the maximum extent

practicable. We also encourage the District to carefully review the CEMS data required by section 5.4 of Rule 4352 (monitoring provisions), in particular NO_x emissions data during start-up and shutdown periods, to ensure that owners/operators of solid fuel-fired boilers are in fact operating emission control systems and minimizing emissions insofar as technologically feasible during start-up or shutdown as required by Rule 4352, section 5.3.3.

III. EPA Action

For the reasons provided in our proposed rule and above, and pursuant to section 110(k)(3) of the Act, EPA is fully approving Rule 4352 into the San Joaquin Valley portion of the California SIP. This final approval of Rule 4352 satisfies California's obligation to implement RACT under CAA section 182(b)(2) for solid fuel-fired boilers in the SJV for the 1-hour ozone and 1997 8-hour ozone NAAQS and thereby terminates all CAA sanctions clocks and Federal Implementation Plan (FIP) clocks associated with this source category. *See* 75 FR 60623 (October 1, 2010) (final limited approval and disapproval of Rule 4352); 77 FR 1417 (January 10, 2012) (final partial approval and disapproval of SJV RACT SIP); and 77 FR 24857 (April 26, 2012) (interim final determination to stay and defer sanctions).

IV. Statutory and Executive Order Reviews

Under the Clean Air Act, the Administrator is required to approve a SIP submission that complies with the provisions of the Act and applicable Federal regulations. 42 U.S.C. 7410(k); 40 CFR 52.02(a). Thus, in reviewing SIP submissions, EPA's role is to approve State choices, provided that they meet the criteria of the Clean Air Act. Accordingly, this action merely approves State law as meeting Federal requirements and does not impose additional requirements beyond those imposed by State law. For that reason, this action:

- is not a "significant regulatory action" subject to review by the Office of Management and Budget under Executive Order 12866 (58 FR 51735, October 4, 1993);
- does not impose an information collection burden under the provisions of the Paperwork Reduction Act (44 U.S.C. 3501 et seq.);
- is certified as not having a significant economic impact on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C. 601 et seq.);
- does not contain any unfunded mandate or significantly or uniquely affect small governments, as described in the Unfunded Mandates Reform Act of 1995 (Public Law 104-4);
- does not have Federalism implications as specified in Executive Order 13132 (64 FR 43255, August 10, 1999);

- is not an economically significant regulatory action based on health or safety risks subject to Executive Order 13045 (62 FR 19885, April 23, 1997);
- is not a significant regulatory action subject to Executive Order 13211 (66 FR 28355, May 22, 2001);
- is not subject to requirements of Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (15 U.S.C. 272 note) because application of those requirements would be inconsistent with the Clean Air Act; and
- does not provide EPA with the discretionary authority to address disproportionate human health or environmental effects with practical, appropriate, and legally permissible methods under Executive Order 12898 (59 FR 7629, February 16, 1994).

In addition, this rule does not have tribal implications as specified by Executive Order 13175 (65 FR 67249, November 9, 2000), because the SIP is not approved to apply in Indian country located in the State, and EPA notes that it will not impose substantial direct costs on tribal governments or preempt tribal law.

The Congressional Review Act, 5 U.S.C. 801 et seq., as added by the Small Business Regulatory Enforcement Fairness Act of 1996, generally provides that before a rule may take effect, the

agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. EPA will submit a report containing this action and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the United States prior to publication of the rule in the Federal Register. A major rule cannot take effect until 60 days after it is published in the Federal Register. This action is not a "major rule" as defined by 5 U.S.C. 804(2).

Under section 307(b)(1) of the Clean Air Act, petitions for judicial review of this action must be filed in the United States Court of Appeals for the appropriate circuit by [FEDERAL REGISTER OFFICE: insert date 60 days from date of publication of this document in the Federal Register]. Filing a petition for reconsideration by the Administrator of this final rule does not affect the finality of this action for the purposes of judicial review nor does it extend the time within which a petition for judicial review may be filed, and shall not postpone the effectiveness of such rule or action. This action may not be challenged later in proceedings to enforce its requirements (see section 307(b)(2)).

List of Subjects in 40 CFR Part 52

Environmental protection, Air pollution control, Incorporation by reference, Intergovernmental relations, Nitrogen dioxide, Ozone, Particulate matter, Reporting and recordkeeping requirements.

Dated: September 13, 2012

Jared Blumenfeld,
Regional Administrator,
Region IX.

Part 52, Chapter I, Title 40 of the Code of Federal Regulations is amended as follows:

PART 52 [AMENDED]

1. The authority citation for Part 52 continues to read as follows:

AUTHORITY: 42 U.S.C. 7401 *et seq.*

Subpart F - California

2. Section 52.220 is amended by adding paragraphs (c)(411)(i)(B)(*4*) to read as follows:

§52.220 Identification of plan.

* * * * *

(c) * * *

(411) * * *

(i) * * *

(B) * * *

(*4*) Rule 4352, "Solid Fuel Fired Boilers, Steam Generators and Process Heaters," amended on December 15, 2011.

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[FR Doc. 2012-26779 Filed 11/05/2012 at 8:45 am; Publication Date: 11/06/2012]